

**REMARKS**

Claims 1, 2, 5, 7, 9, 11-17, 20, 22-31, 32, 35-40, 42, 47-49, 51- 53, 55, 57-59, 61-67, are currently pending. Claims 22-25, 27, 30, 32, 35, 37, 47, 49, 51, 57, 58, 59, 61-67 have been withdrawn and claims 1, 2, 5, 7, 9, 11-17, 20, 26, 28, 29, 31, 36, 38-40, 42, 48, 52, 53, and 55 are presented for reexamination in light of the amendments and following remarks.

In item 2, on page 2 of the Office Action, the Office indicated that the specification does not comply with 37 C.F.R. § 1.77, requiring that certain sections of the application be prefaced with headings. Applicants note that the relevant sections of the specification originally filed, as the national stage of International application PCT/EP00/09584, are prefaced with the appropriate headings. Specifically, the heading "BACKGROUND OF THE INVENTION" is present on page 1, the heading "SUMMARY OF THE INVENTION" is present on page 3, and the heading "DESCRIPTION OF THE INVENTION" is present on page 9. Furthermore, the abstract of the disclosure is present on the cover sheet of the PCT application in the required location. As amended, the specification includes the heading "BRIEF DESCRIPTION OF THE DRAWINGS" on page 52. Therefore, Applicants request that any objections to the specification be withdrawn.

In item 4, the Office indicated that a sequence modifier is required for the amino acid sequence presented on page 15, line 15. The specification has been amended to include this sequence identifier. In addition, a substitute Sequence Listing, in paper and computer readable form, has been submitted herewith, including this sequence identifier.

In item 5, the Office objected to claims 14, 18, 21, 36, and 38 as being of improper dependent form. As amended, claims 14 and 18 are independent claims and claim 38 properly depends from claim 14. In addition, as amended, claim 36 does not recite a "membrane or a recombinant host cell" and therefore is properly dependent on claim 16. Accordingly, Applicants respectfully request that these rejections be withdrawn.

In item 6, the Office objected to claim 36 because of the perceived informality that the claim was written "produced by a the method . . . ." Applicants respectfully note that as previously amended, the word "a" was deleted in claim 36 and the word "the" was added. The amended version of claim 36, "produced by the method . . . ." appears in the current listing of the claims. Therefore, Applicants request that this rejection be withdrawn.

In item 7, the Office rejected claims 6, 8, 17, 18, 26, 31, 39, 40, 42, 43, 52, 53, 68, and 69 under 35 U.S.C. § 101, because it asserted that a "nucleotide sequence" is non-statutory subject matter. Applicants have amended these claims to recite an "isolated IGS4 polypeptide," "isolated polypeptide," or "an isolated polynucleotide" and therefore they do not claim subject matter that occurs in nature. Applicants respectfully request that the rejection under 35 U.S.C. § 101 be withdrawn.

In item 8, the Office rejected claims 6-16, 18-20, 28, 29, 31, 33, 34, 36, 42-45, 48, 50, 54-56, 60, 68, and 69 under 35 U.S.C. § 112, first paragraph, because it asserted that these claims contained subject matter not described in the specification to adequately fulfill the written description or enablement requirements. Specifically, the Office asserted that the term "IGS4 neuromedin receptor protein" is the only

distinguishing limitation of the claims and is defined in the specification only in functional terms. As amended, the claims recite the sequences of SEQ ID NO: 2, SEQ ID NO: 4, SEQ ID NO: 6, or SEQ ID NO: 8, and are limited to these sequences. Therefore, these claims are limited by specific polynucleotide sequences, not by "every conceivable means for achieving the stated purpose," as the Office asserted. Furthermore, claim 9 no longer contains the term "which has at least 80% identity with" and so is described adequately in the specification by the recited SEQ ID NOS. Accordingly, Applicants respectfully request that the rejection be withdrawn.

In item 9, the Office rejected claims 1, 2, 5, 7,-9, 11-17, 31, 36, 41, and 43 under 35 U.S.C. § 112, first paragraph, for failing to comply with the enablement requirement. Specifically, the Office required a Deposit Declaration to indicate that the recited subject matter had been deposited. A Deposit Declaration, executed by Dr. M. Verhage, the Director of Intellectual Property Department, of Solvay Pharmaceuticals, B.V. attesting that the claimed subject matter was deposited in accord with the Budapest Treaty, is submitted herewith. Therefore, Applicants respectfully request that this rejection be withdrawn.

In item 10, the Office rejected claims 1, 2, 5-21, 26, 28, 29, 31, 33, 34, 36, 38-46, 48, 50, 52-56, 60, and 68-69 under 35 U.S.C. § 112, second paragraph, because it asserted that the subject matter claimed was not particularly pointed out and distinctly claimed. Specifically, in item 10.1 the Office rejected the remaining claims because it found the term "IGS4", which was allegedly used as a limitation, to be vague and indefinite and not materially different from a claim term including a SEQ ID NO designation. Applicants traverse this rejection. The term "IGS4" is not recited in the

claims as a limitation, but as a further characterization of the sequence recited in SEQ ID NO: 2, SEQ ID NO: 4, SEQ ID NO: 6, or SEQ ID NO: 8, which is provided in each claim reciting "IGS4." This use of the term "IGS4" is echoed on page 9, lines 8-10 of the specification, where "IGS4" is defined as the SEQ ID NOS. Because the recitation of the term "IGS4" is appropriate, Applicants respectfully request that the rejection be withdrawn.

In item 10.2, the Office asserted that it is unclear how a polypeptide can exhibit expression as claimed in claims 7, 8, 10, 20, 21, 43, 46, 54, and 60. Independent claims 7, 8, 10, 20, 21, and 60 as amended, recite that the isolated polynucleotide encodes a polypeptide, and that the polypeptide is expressed in the recited tissues. Therefore, expression is provided as a function of the tissue. Accordingly, Applicants respectfully request that this rejection be withdrawn.

In item 10.3, claims 8, 19-21, 28, 33, 34, 43, 45, 46, 50, and 60 were rejected as being vague and indefinite because of the term "high affinity", which the Office asserted was not defined. Applicants traverse this rejection because the term "high affinity" is clearly defined in the specification. Specifically, on page 14, lines 16-19, the specification provides that

in the context of the invention, the term "high affinity" is understood as to describe a ligand binding showing log EC<sub>50</sub> values of at least below -6.00 (approx. 660 nM), preferably log EC<sub>50</sub> below -7.00 (approx. 55 nM), more preferably log EC<sub>50</sub> below -9.00 (approx. 500 pM to 1.2 nM), and most preferably log EC<sub>50</sub> below -10.00 (approx. 50-100 pM).

Because the specification provides a clear set of defining conditions, Applicants respectfully request that this rejection be withdrawn.

In item 10.4, the Office rejected claims 28, 33, 34, and 38 because it asserted that there was no antecedent basis for the term "IGS4 neuromedin receptor protein" or "IGS4 receptor." As amended, claims 28 and 38 use the term "an" before the first use of the terms "IGS4 neuromedin receptor protein" and "IGS4 receptor," thereby providing antecedent basis for any subsequent recitation. Accordingly, Applicants respectfully request that this rejection be withdrawn.

Finally, in item 10.5, the Office rejected claim 29 as being vague and indefinite because it alleged that there is no antecedent basis for the term "the IGS4 neuromedin receptor protein according to claim 28" as claim 28 is drawn to a method. Applicants has amended claim 29 to delete the quoted language. Applicants respectfully request that this rejection be withdrawn.

In item 11, the Office rejected claims 6, 7, 19, 20, 42, and 54 under 35 U.S.C. § 102(b) as being anticipated by Tan et al. in light of Fuji et al., because it asserted that Tan et al. disclose an isolated nucleic acid encoding an orphan G protein-coupled receptor, which Fuji et al. identifies as a neuromedin receptor. As amended, the pending claims recite the claim terms SEQ ID NO: 2, SEQ ID NO: 4, SEQ ID NO: 6, or SEQ ID NO: 8. Because neither Tan et al., nor Fuji et al. recite SEQ ID NO: 2, SEQ ID NO: 4, SEQ ID NO: 6, or SEQ ID NO: 8, Applicants' claimed invention is not anticipated. *See Verdegaaal Bros. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987) ("A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference."). Accordingly, Applicants respectfully request that this rejection be withdrawn.

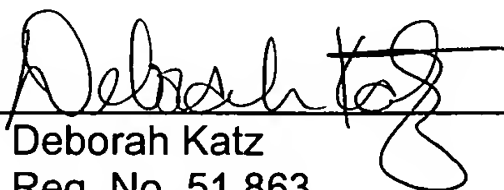
In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, L.L.P.

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**Attachments:**      Substitute Sequence Listing  
                         Deposit Declaration